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**VALIDITY OF MATERNAL REPORT MEASURES  
OF PASSIVE TOBACCO EXPOSURE IN  
CHILDREN**

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Most studies that consider the postnatal tobacco exposure effects on child outcomes rely on maternal report measures including: mother's current smoking, reported number of hours that the child is exposed, and number of household smokers. In our study of 221 6-year-olds, measures of postnatal passive tobacco exposure included the above self-reports. Sixty-one per cent of the mothers were current smokers; average daily number of cigarettes was 11.3 (range: 0.5–50). Reported average daily hours that child was exposed to tobacco smoke was 2.6 (range: 0–7+). Average number of household smokers was 1.0 (range: 0–5). Passive tobacco exposure was validated with a urine sample from the child that was analyzed for cotinine. Urine cotinine levels ranged from 0 to 95.6 ng/ml. Mean and median were 15.9 and 11.9 ng/ml. Correlations between urine cotinine and mother's reported current average daily cigarettes ( $r = 0.36$ ;  $p < 0.001$ ), and average daily number of hours exposed ( $r = 0.29$ ;  $p < 0.001$ ), and number of household smokers ( $r = 0.33$ ;  $p < 0.001$ ) were low, although statistically significant. Notably, one quarter of the children whose caretakers reported that their children received  $< 1$  h of daily passive tobacco exposure had urine cotinine values  $> 14$  ng/ml (range: 15–68 ng/ml). Our results indicate that maternal reported measures of child's passive tobacco exposure are not particularly good estimates of the child's actual exposure. Study protocols that consider potential effects of environmental tobacco exposure on child outcomes should include a biological marker of the child's passive exposure.

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